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ABSTRACT

Two examples of students' self-evaluation in writing are used to illustrate the wide range of tasks that can be addressed in self-evaluation and initial exploratory procedures for furthering self-evaluation. The first example illustrates the use of records for self-evaluation of handwriting by a 4-year-old, and the problem that can arise when evaluation criteria are not clear or meaningful to the student. The second example illustrates the use of records for self-evaluation of creative writing by a 7-year-old and some techniques that can aid in the circumvention of the problems of criteria that are not easily defined. Both projects illustrate that criteria will need to be revised even when initial criteria are reasonably well-selected. It is concluded that joint teacher-learner assessment in writing is useful in testing the adequacy of task specifications and modifying such specifications as needed. Student participation in the production, evaluation, and revision of student writing provides a means for turning the evaluation of writing over to the students themselves. The identification of illustrations of criteria and improvements in meeting criteria is aided by student self-recording. A recommendation for extending these procedures to classroom-wide peer tutoring is offered. (RH)

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Self-recording and Discussion in Young Children's Formative Self-evaluation of Their Writing

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Abstract

The problem of writing development for young children is presented in terms of a problem in self-evaluation. To address this problem, procedures for developing self-evaluation are presented, particularly record-keeping and discussion. These procedures are illustrated in two examples of teacher-student tutoring, one in handwriting by a four year old and another in creative writing by a seven year old. A recommendation is made for extending these procedures to classroom-wide peer tutoring.

Self-recording and Discussion in Young Children's Formative Self-evaluation of Their Writing

Self-evaluation in writing has been offered as the solution to the problem of evaluating student writing in a way that leads to progressive improvements in their writing (Brown, 1986). Such an approach to evaluating writing stands in contrast to the traditional reliance on the teacher's comments and grades. Instead of having evaluation begin and end with the teacher's contribution, the idea with student self-evaluation is to have students progressively take over the teacher's role and go beyond what a teacher can reasonably be expected to provide.

The limitations of maintaining a predominant dependence on teacher evaluations are obvious. If the evaluation of student writing remains the exclusive responsibility of the teacher, students have little basis for conducting any revision of their writing before it has been evaluated by the teacher. Such a situation offers little escape from an indefinite recycling of drafts between student and teacher that begin anew with each new piece of writing. Even when students are asked to achieve some degree of self-evaluation in their writing, the focus may be largely on the mechanics of writing: grammar, spelling, and punctuation (cf. Huot, 1990). Evaluative attention on only the mechanics of writing leaves many qualitative aspects of writing unattended to. Students may be told about qualitative features like creativity, originality, and organization; but they may be unable to effectively evaluate these features by themselves.

One reason for the neglect of many qualitative aspects of writing is that they are difficult to articulate clearly to students. Many

students must learn about these features largely on their own after years of exposure to the effects of their writing. Although some students may readily acquire writing skills and perhaps an ability to evaluate and revise their own writing with increasing effectiveness, many if not most students will be left with writing problems and a lack of confidence in their ability to address these problems.

In order to develop a thorough coverage of self-evaluation, situations need to be arranged in which the students themselves learn how to do more and more of the evaluation of their own writing. As Brown (1986) has put it,

> The trick is to turn the whole process of essay scoring over to the students. Make the students create writing assignments. Have them debate the intrinsic intentions, the telos, the rhetorical situation. Have them develop the criteria--extrinsic and intrinsic--that define good, bad, and indifferent essays. Have them write the essays and judge them as if they were scorers. Have them evaluate them as if they were teachers doing engaged evaluations. Ask them to recommend and debate strategies for improving the papers. Move on to a different topic calling for a different kind of discourse and repeat the process. Do it for social studies tasks, science tasks (for example, laboratory reports), book reports, note-taking, letters to the editor, poems, or song lyrics. Above all, implicate students in evaluation; make them responsible for setting standards and meeting them. (pp. 128-129)

At first glance, this seems more easily said than done. How can

students use qualitative criteria, like "creative" and "original," that are admittedly fuzzy even to teachers? According to Sadler (1989), "A fuzzy criterion is an abstract mental construct denoted by a linguistic term which has no absolute and unambiguous meaning independent of its context" (p. 124). Although such criteria would be difficult to acquire by reading or listening to a definition of them, an appreciation of such criteria is much easier to acquire by attending to their relevant contexts in particular instances.

One practical way to call attention to relevant contexts and to clarify criteria is to have students keep their own records of progress (see Moxley, Kenny & Hunt, 1990). These records should include specific indicators of progress and collections of actual student work on which these records are based. Together, these records provide occasions for discussions that can clarify even fuzzy criteria. Discussion of the records in the context of what the records are based on helps to clarify the student's understanding of the indicators used in records and what they indicate. These records also provide a basis for discussing what does or does not constitute an improvement in meeting criteria. In addition, discussion of writing criteria in the context to which it is applied is good for both teacher and student: for the teacher to articulate what is often tacit knowledge and for students to express their understanding of this knowledge. Furthermore, discussions on which indicator to use and when to change to a new indicator is a useful evaluation process in itself.

In using records with self-evaluation, care needs to be taken to continually reevaluate the usefulness of any one indicator.

Indicators cannot and should not represent all the desirable qualitative features equally well. Some features of a student's writing may be reasonably well-developed and do not need an indicator for their improvement. Other features may be less well-developed, but of little interest at the time. The features of interest that need development are the features to be recorded, and these may be many or few. Criteria for recording will change as students progress and their interests change.

In the following, two examples of self-evaluation with recording are given. These examples illustrate the wide range of tasks that may be addressed in self-evaluation--from handwriting to story writing. They also illustrate some initial exploratory procedures for furthering self-evaluation. The first example (in which the second author was the teacher) illustrates the use of records to self-evaluate handwriting with a 4 year old and the problem that can arise when the evaluation criteria are not clear or meaningful to the student. The second example (in which the third author was the teacher) illustrates the use of records to self-evaluate creative writing with a 7 year old and some techniques that can help to circumvent the problems of criteria that are not easily defined. Both projects illustrate that even when initial criteria are reasonably well selected there will eventually be a need to revise or change criteria.

Example 1

Frank is a 4 year old boy with fairly advanced fine motor skills for his age who was interested in learning more about numbers. He could count beads to 35, identify the numerals 1, 2, 3, 4, 5, 7, and 8, and

write the numeral 1. After this preassessment, Frank was first taught to name the numerals from 0 to 10 and to identify the number of objects that corresponded with each numeral. Then he was taught to write them. The materials for writing included pencils, pens, markers, crayons, paper, slate, sandbox, construction paper, glue, scissors, stickers, and certificates. The instruction took place in a preschool in the afternoon, once or twice a week, for half an hour each time.

Insert Figure 1 about here

Frank's preassessments for writing numerals on 1/29 and 2/1 showed he had considerable difficulty in writing the numerals from recall. See Figure 1. Attempts to write six and nine are missing because he said he didn't know how to do them. At the beginning of instruction a slate was used for his writing. Frank was shown how to make a numeral while talking through it. Then his hand was held and guided while talking through the numeral. With 5, for example, the teacher said, "Down, around, and put a hat on." After doing this a few times, Frank would practice writing the numeral on his own on a blank piece of paper. He did not say the directions out loud when he was writing, although when he was once asked to say how he made a 5, he gave back the same directions he had been given. He then selected the best numeral he had written and glued it on the chart. See Figure 2 for an example of the practice sheet from which the best numeral of those written that day was selected. The dotted outline indicates the location of the numeral that was torn or cut

out for placement on his chart.

Insert Figure 2 about here

Frank then compared that numeral with his production of that numeral the previous time. The more recently produced numeral was then marked (usually with a handwritten star) if there was an improvement. See Figure 3 for a comparison of Frank's numeral writing over time. At first the teacher drew the mark for improvement (a star); then Frank drew it, sometimes using a a circle or a smiley face for marking the better numeral. Frank was then asked why he thought the numeral was better. Occasionally he identified a specific feature. For example, Frank said the zero on the second day (March 12) was better than the zero on the first day (March 1) because it was smaller. But often he did not. For example, when Frank was asked why the second day's 2 was better than the 2 on his pretest, he simply said it was because it looked more like a 2. Each session a new numeral was added for Frank to practice along with each previous numeral he had worked on.

Insert Figure 3 about here

As the project progressed, the following changes were made. When Frank advanced to writing the numerals 0-4, he did not write the 2 and 3 as well as he had done before. So new numerals were not added for a few sessions. As an additional aid, dotted numerals were used for him to trace (one day only) and then boxes to write in. On the 5th

day, a sandbox was used to draw the numerals. Frank then had the choice of using the slate or sand. On the 7th day, a booklet of his work was made. Frank put it together from construction paper, wrote his numerals in it, traced them with glue, and then sprinkled sand on them. On the last day, certificates were made up for the numerals Frank had learned to write. He wrote the numeral in the box on each certificate, which was then taken home. Also, on the last two days Frank could choose which materials to practice with, which numerals to practice, and which activities he wanted to do.

Frank learned to write the numerals from 0-8 in a legible form. All his letters showed improvements over his pretest although he still had some difficulty in orientation (e.g. Z). His progress during the sessions, however was not steady. His writings showed improvements from the first to third sessions, but showed little improvement and some deterioration in the 4th to 6th sessions. During these middle sessions, Frank appeared to be losing interest in the activities, taking less care in how he wrote the numerals. The numerals 0 to 3 that were written on the seventh day are essentially a return to the quality of the letters written on the third day. On the final two days his enthusiasm returned and he produced less hurried and better formed numerals.

Frank may have assumed that his goal was to write "perfect" numerals and may have become discouraged with his ability to do so in the middle of his project. His numerals on the third day: 0, 1, 2, 3 were quite legible. Although some improvements were still possible, they would have been relatively minor; and Frank may have been unclear as to how he could make these improvements. Later, when

Frank was shown the numerals he wrote on his pretests, he saw how much he had improved and displayed renewed interest in his writing. He was also given more choices in the numerals he could write (before, he had been restricted to only one new numeral in addition to the numerals he had previously written). He seemed to like having more choices. He regained his enthusiasm and confidence, took his time, and appeared to give his best effort when writing his numerals on the last two days. Moving on to new numerals may also have been a way of telling him he had done a good job with the other numerals.

This project illustrates the importance of (1) making sure the student has the information to make a reasonable self-evaluation, (2) making sure the improvements are meaningful to the student, and (3) giving the student options on what to evaluate. In this case, the verbalizations of the student showed little awareness of what the more refined improvements in letter formation would consist of, and improvements in his numeral writing came to a temporary halt. The teacher was faced here with the predicament of trying different instructional techniques or moving on to something else. A combination of both of these alternatives was implemented, and the last few sessions permitted a fuller realization of what the child could do. This predicament may perhaps have been avoided if the child had been given more choices of numerals to practice on from the beginning. Displaying the pretest results on the graph may also have made Frank more aware of how much progress he had made.

Note how all of this is told in the record. The slowdown of improvements in the middle of the record is saying that this activity is losing its meaningfulness. The upswing in improvements and the

child's enthusiasm at the end of the project is saying that some of the changes in instruction should be tried again.

Example 2

Johnny was a 7 year old third grader in a class of 6 students for the gifted (K-3). He wrote on a writing table that had pens, pencils, and writing tablets on it. The student came to the class 20 to 30 minutes early and would typically write short stories with illustrations. For this reason he was selected for tutoring on his writing development.

The first part of this tutoring time was used to review his previous work, discuss whatever was on his mind, and what he would write about. Then he would begin to write, or draw a picture, or select a story starter from an envelope. He usually talked as he wrote, sometimes keeping on the written topic, sometimes not. When he finished writing, often while he was drawing, the teacher scored his work. Later, the teacher and the student scored the writing together. Disagreements on the scoring were common and these were discussed. Sometimes these were disagreements on how to classify an item for his score, but more often they were disagreements on whether or not to count an item. Usually he wanted to count more items than the teacher. He was highly verbal and "loved" to argue any point. Sometimes he persuaded the teacher to agree with his interpretation and sometimes not.

The chart on which he recorded his progress (see Table 1) was displayed in the room for the other children to see, and he often explained what all the numbers meant to anyone who would listen. He wrote the numbers in the proper category and on the proper date.

He also had a choice of stickers for more frequent use of a category and for including a new category, which he placed on the record himself. He would read selected stories to the rest of the class, and all of his stories during the tutoring project were later typed up, xeroxed, and bound into books to be used as gifts for his parents and grandparents.

Insert Table 1 about here

The four primary categories that were recorded--fluency, flexibility, originality, and elaboration--were adapted from Williams (1970). In this study, fluency is the total number of words in the writing. Flexibility is the total number of idea changes (e.g. "so we just went back home" in story #1). Originality is the total number of ideas the child has not read or heard about or used previously (e.g. "streets . . . made of cheese" in story #1). Elaboration is the total number of details (e.g. "horrible" in story #1). The secondary criteria were adapted from Eberle (1987). They are represented by the acronym SCAMPER. S is for substitute (e.g. "streets . . . made of cheese" in story #1). Note: the same expression may qualify under more than one category (e.g. "streets . . . made of cheese" counts for originality, substitute, and put to other uses). C is for combine (e.g. "draw and ride" in story #2). A is for adapt (e.g. "flea talked" in story #3). M is for three things: (1) modify (e.g. "take more time" in story #4), (2) magnify ("a big pain" in story # 2), (3) minify (e.g. "ate all the food" in story #4). P is for put to other uses (e.g. "cheese" for streets in story #1). E is

for eliminate (e.g. "never moved again" in story #1). And R is for two things: (1) reverse (e.g. "clocks had been switched" in story #5), (2) rearrange (e.g. "messes up homework" in story #2). The student had been made familiar with these techniques with examples from books such as Cloudy with a Chance of Meatballs (Barrett, 1978) and several in-class activities.

The following represents the baseline story writing that Johnny wrote on his own without assistance from the teacher on recording or self-evaluation. In these and the following stories, his original spellings are preserved:

9/14 the race continude for awers and awers but the turtul won they shook hands and went home. THE END

9/21 I wanted hot dogs for super, she wanted lima beans."I hate lima beans." "The next day I diden't mak my bed befor I went to school. I could see this was going to be a very bad day. I was on my way to school and a truck full of

10/5 donkeys love to munch on kerits don't love that at all "I hate that song." yuk yuuuuuuk and the music teatcher sits there and it makes me throw up

When the project began, the stories were read back aloud by the teacher, and this provided opportunities for revision. The student could volunteer the revision upon hearing the readback or the teacher might ask for further clarification. Sometimes the revisions were dictated, and sometimes they were written in by the student. When the student read his stories to the class, changes might also be suggested by children in the classroom. For the most part, revisions for standard spelling and punctuation were not made until the final

"published" copy, which was typed up by the teacher for Johnny to take home in a booklet of collected stories.

The following are examples of the stories Johnny produced with the assistance of the teacher's help, self-recording, and self-evaluation. Revisions in response to requests by the teacher for more information are enclosed in brackets.

PIACES AROWND THE world (Story #1, 10/12)

Two days after my bithday we were going to move. We lived on a farm. Me, my sister, and I diden't want to go to the City, [because I thought I'd fall thru the streets because they were made of cheese. But when I got there the streets weren't made of cheese. And I wanted to stay there, but my mother and father didn't. So, I thought that they know best, so we just went back home. And about five minutes later, I went into the bathroom and there was this horrible sound coming from the bathroom [It was me getting sick of riding in the car.] My mom asked me what was wrong and I said I didn't want to move anymore. [We never moved again for at least five years and I was glad.] THE END]

Comment: This story was done in response to Johnny's concerns over moving. The words after City were dictated in response to a request for more information. After the dictation, two more sentences were inserted in response to a request for further information. The child wanted these revisions done by dictation rather than write them down himself.

THINGS ABOUT ME (Story #2, 10/27)

I have light brown hair, brown eyes and straight white teeth. I like to draw and ride my skateboard, bike and I like to ressal. I have a [little] broth name[d] Joe. He also likes to draw too. He is a [big] pain in the butt because he bothers me [all the time] and [he] knoks my teeth out. He messes up my homework by kicking the pincil [on the eraser, out of my hand]. I always get blamd for what I don't do. One time I was listening to someone talk and the teacher blamed me and I hade to move my desk into the corner for the whole day. [I felt happy to get away from everybody, because I hated being blamed for stuff I didn't do.]

Comment: This story was done in response to a story starter card. Note that the revision after "kicking the pincil": "on the eraser, out of my hand" may have been a somewhat unreflective response to a request for more information. In other words, "on the eraser" may have been more of a response to word association than to a meaningful context. However, awkward revisions like this were rare.

THE COW AND THE FLEA (Story #3, 11/2)

One day I went to a farm with my class and we had to walk! I had on my best shoes. When I got to there my feet were so tierd that I fell asleep. About three hours later I woke up. I was all alone in the middle of a field. But the field was giant. There was nothing but a cow, so I went to the cow and rode it all around. But no one was seen until I saw the teacher's back. [I]n a few muinites she was gone. When I turned around I saw a

flea and it talked to the cow in a very skweeky voice. and heers what he said. "I saw teacher say, that she did not want any boys going to go, to go, to sleep or riding a cow. I heard the[m] talking so I got real scared. So I got off the cow and started walking back to school. When I got back I saw all the napkins from snack, so I started eating. About three minutes after I was done they cane back. The teaher said "where have yow been"? I said I was at the park sleeping. THE END

Comment: This story was written entirely by the student outside of class, without dictated revisions or additions except for the m in "I heard the[m] talking" and the change from lower case i to upper case I in "[I]n a few muinites she was gone. Note that no other revisions were made on the spelling of words because the main concern was to have Johnny put creative thoughts down on paper without his being distracted by considerations of spelling or grammar.

LOST IN SPACE (Story #4, 11/10)

"10-9-8-7-6-5-4-3-2-1-0" Blast off! It was 1910 when I started making my ship. My ship or shudle had broke down three years ago in the rain. Now I [have] a new improved shudle, it's water proff thank goodness! It was raining when I blasted off. It was really cold too. Ut oooh, here comes a giant meteorite no no !! its a planet. aaaaaa pow I've crashed in space. [I've wrecked my Shuttle, the Man Tiger.] But what planet am I ooon! I'v fallen in a deep dark whole. there was something very interesting about that planet. I thot that if I stayed there with all th food I have that I could stay there for

two days. By the time the two days were over I was ready to go back. I had eaten all the food and drank all the drinks. So on the way [back] I got thirsty. Just then i was passing the milky way so I got out and started drinking until I could hardy move. So I waddled my way to the shuddle and when I got back everyone was happy. They were so happy they jumed for joy because I have ben on the moon for exacaly two days. Nextime I'll take more food with me.

Comment: This story was written by the student at home.

THE SCHOOL (Story #5, 11/17)

One morning on Halloween Bobby and Mike were walking to school and when they were not very far from the school they hered a sound. They hered the sound and did not spare a second. They ran as fast as they could [from the sound]. The sound was very odd because it did not sound like a ghost sound. It sort of sounded like a banging sound. By the time the banging sound was over they wer half way [back to school]. The bell rang and everyone came runing out [because the clocks had been switched]. Both Mike and bobby thought that it was eight fifteen. [But it wal really two thirty. Later that] day I was out for a walk. An U.F.O. was going around my head. it flew so fast I could hardly see it. I started to screem and Bobby hered it and started running twared me. He was carrying a baseball bat. He hit the UFO so hard that it disappeared. That week-end we went to the school to investigate. The school was empty except for one room we hadn't checked yet, because we didn't know anything about it, We looked thru a window and saw a

glowing figure. I didn't know what it was, but it might have been the spaceship, because I couldn't quite see it. We left about five or ten minutes later. I never knew what happened to the spacecroft or the banging sound for the rest of my life, but I'm only nine.

Comment: The last part of this story from "He was carrying a baseball bat" was dictated because of time limitations. His stories had become so long that it was difficult for him to write them down in one session.

In summary of Johnny's writing, note that Table 1 shows improvement in all the categories that were used. Note also that the improvement is not simply a reflection of more words written (fluency) in as much as the percentage increase in other categories was greater than the percentage increase in fluency.

Discussion

The above two examples bring out the importance of clear criteria for evaluation and illustrate some procedures that can help provide this clarification even when criteria are fuzzy. Discussion with the student can facilitate this clarification when there are records that can provide concrete instances for the discussion. To be effective, these records need to show not only what the student did, but also where the student made improvements. If improvements are not forthcoming or if they have reached a point of diminishing returns, criteria need to be reexamined and perhaps changed.

In the first example, the criteria for evaluating handwriting performance needed to be reexamined after the student produced legible numerals. Although inquiries were made to assure that the

student could verbalize or point to specific differences that indicated improvements, the student's responses were rather minimal. The record, which is typically the best evidence as to whether the criteria are clear to a student, showed Frank had difficulty in producing these improvements. At this point, if not earlier, the decision of whether or not to pursue further refinement of a particular numeral could be left to the student because more benefits might be gained by moving on to other numerals, as was done in the later part of the project.

In the second example, multiple criteria were pursued for writing stories, and the student generally made improvements in the frequency of meeting these criteria. By the end of the project, however, there is some evidence that the criteria need to be reconsidered. The stories were being dictated more than they were self-written because Johnny wanted to dictate his stories, which allowed a longer story to be written down in the alotted time. To encourage more writing than dictation of stories, recording a criterion like word length might be stopped while recording a criterion like originality might be continued. In addition, using a computer might also encourage more writing and less dictation. Writing a story with a word processor program on the computer is easier than writing a story with handwriting.

All of these changes in criteria and all of the reasons for these changes are appropriately discussed with the student. Student involvement in deciding on objectives and criteria helps to ensure they are meaningful. Eventually we want the students to make these decisions themselves. As Sadler (1989) puts it:

> Knowledge of the criteria is . . . developed through an inductive process which involves prolonged engagement in evaluative activity shared with and under the tutelage of a person who is already something of a connoisseur. . . In other words, providing guided but direct and authentic evaluative experience for students enables them to develop their evaluative knowledge, thereby bringing them within the guild of people who are able to determine quality using multiple criteria. It also enables transfer of some of the responsibility for making evaluative decisions from teacher to learner. (p. 135)

Although it is important to make use of the teacher's evaluative knowledge in the beginning of instruction, we want to use this knowledge in ways that can later be turned over to the student.

In conclusion, joint teacher-learner assessment in writing is useful in testing the adequacy of task specifications and modifying them as needed. In addition, student participation in the production, evaluation, and revision of their writing provides a means for turning the evaluation of writing over to the students themselves. Identifying specific instances that illustrate the criteria and improvements in meeting that criteria is also aided by student self-recording, which provides conspicuous occasions for self-evaluation. In applying these methods to a class of students, peer tutoring may take over much of the function of teacher tutoring. Peer tutoring is also likely to be effective in that (1) peers face the same tasks, (2) they can help to provide alternative solutions to common problems, (3) the evaluation of one student's writing by another student brings

an objectivity to the task in that students are less likely to be defensive of and committed emotionally to student work other than their own, (4) the idea of audience and writing to the reader comes prominently into play with a tutor, and (5) the tutor as reader provides a form of publishing for the author. In frequently evaluating their own and other students' writing, students are learning how to criticize constructively, to read closely, and to rewrite. Students may still be unable to make explicit definitions of fuzzy criteria after doing this, but explicit statements that define such criteria may be unnecessary as long as their writing meets that criteria.

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Figure Captions

Figure 1. Frank's preassessments in writing the numerals.

Figure 2. Frank's practice sheet for writing the numeral 2.

Figure 3. Frank's progress chart in writing the numerals.

Table 1 Jimmy's Self-recorded Progress

Week	1	2	3	4	5
Fluency	107	144	207	223	258
Flexibility	8	9	17	23	35
Originality	3	5	7	9	12
Elaboration	8	9	18	39	52
S.C.A.M.P.E.R	3	5	7	8	11
substitution	1	0	1	1	1
combination	0	1	2	1	2
adaptation	0	0	1	1	0
modification magnification & minimization	0	1	1	1	4
put to other uses	1	1	1	2	1
elimination	1	1	1	1	2
reversal and rearrangement	0	1	0	1	1

Figure 1. Frank's preassessments in writing the numerals.

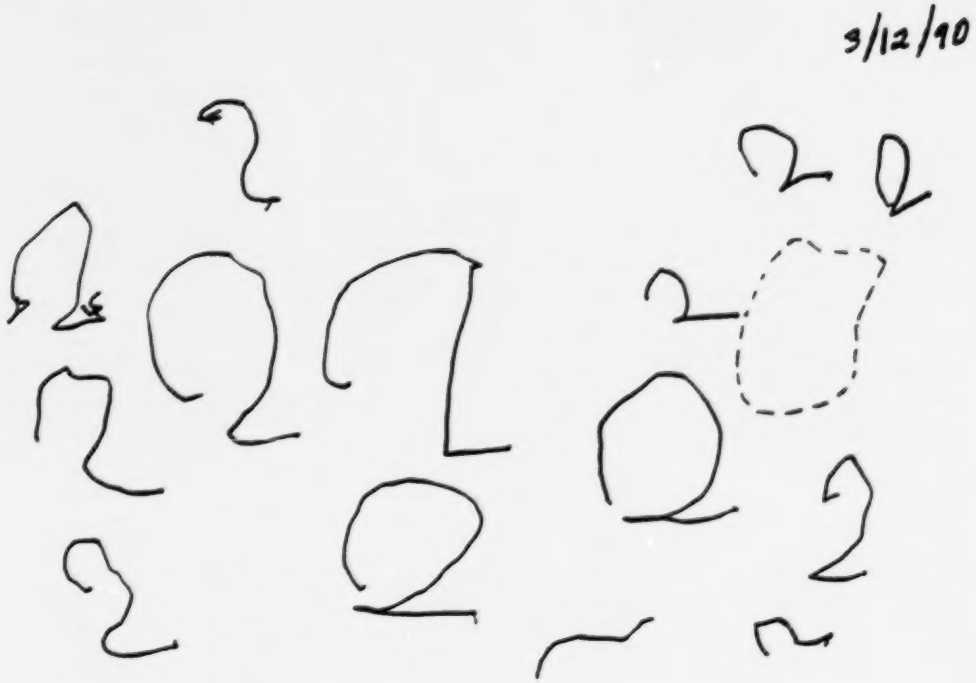

Figure 2. Frank's practice sheet for writing the numeral 2.

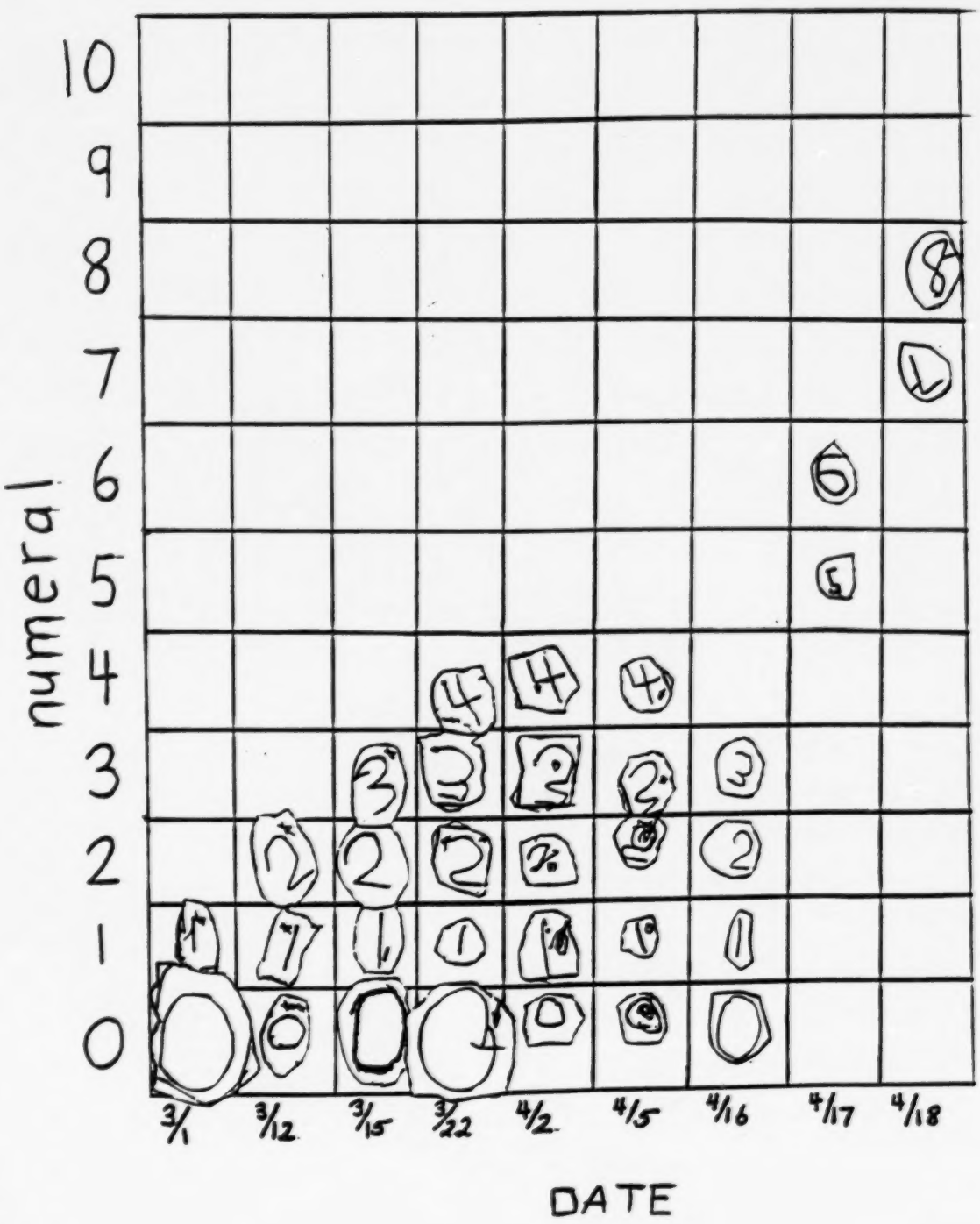

Figure 3. Frank's progress chart in writing the numerals.